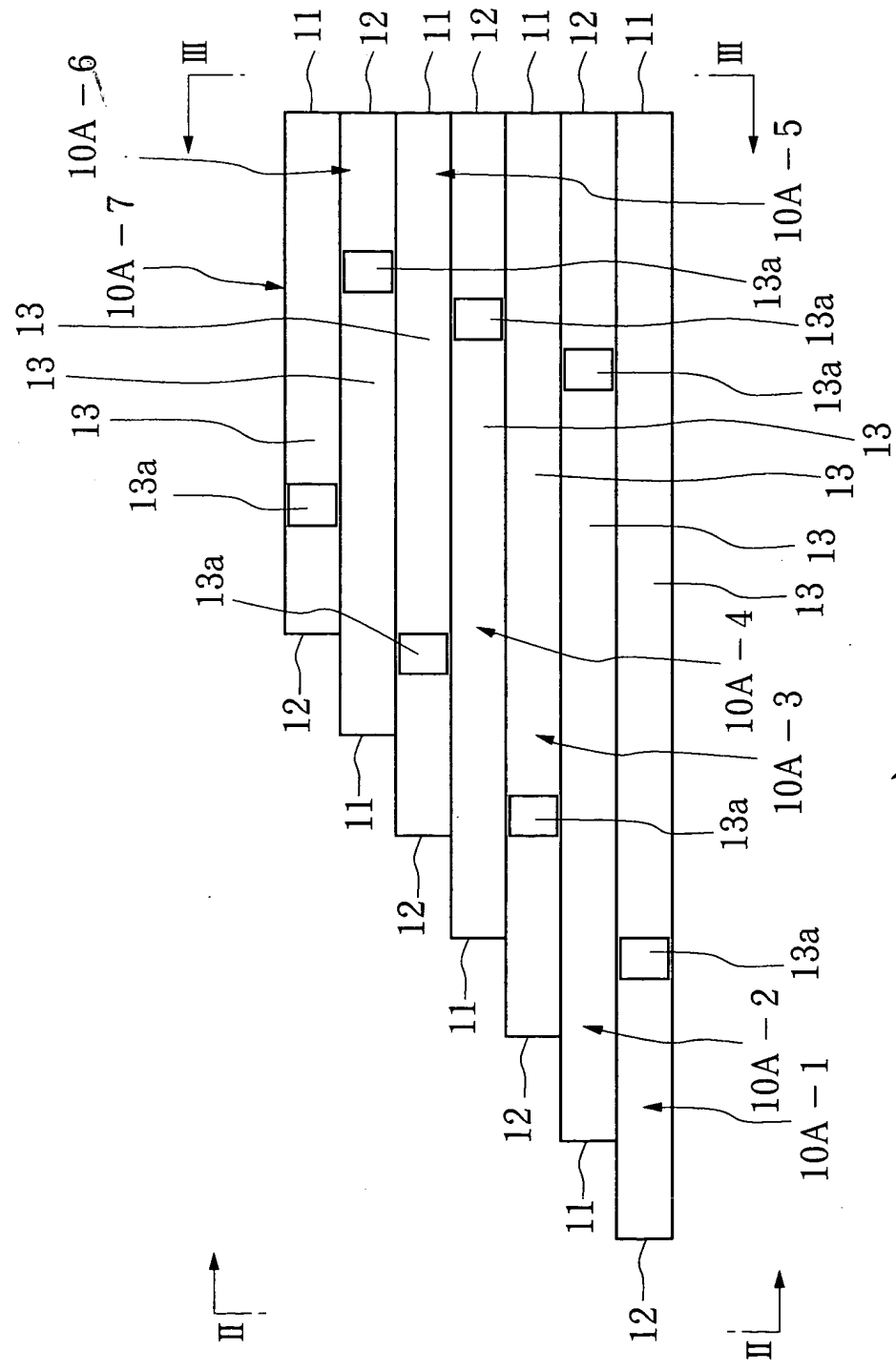


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 DRAFTSMAN
 MAR 31 2003
 PATENT & TRADEMARK OFFICE

CLASS. SUBCD
 181 293

FIG. 1

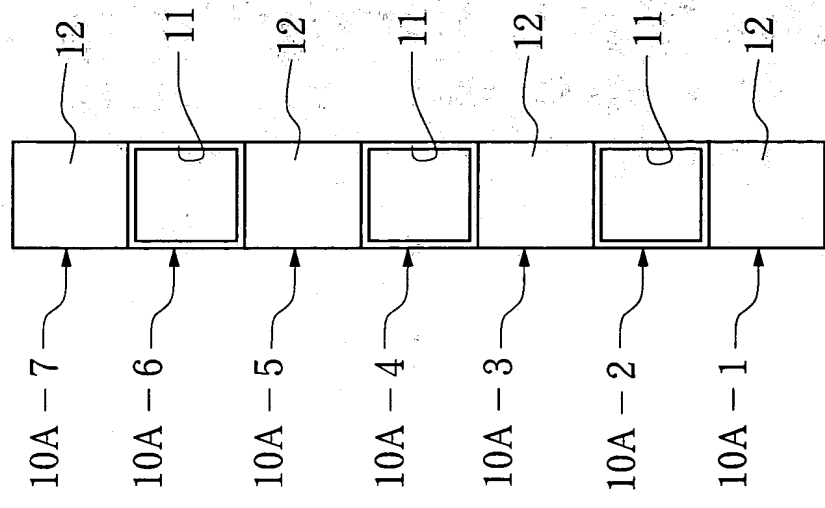


5: SOUND RADIATING STRUCTURE

Handwritten signature

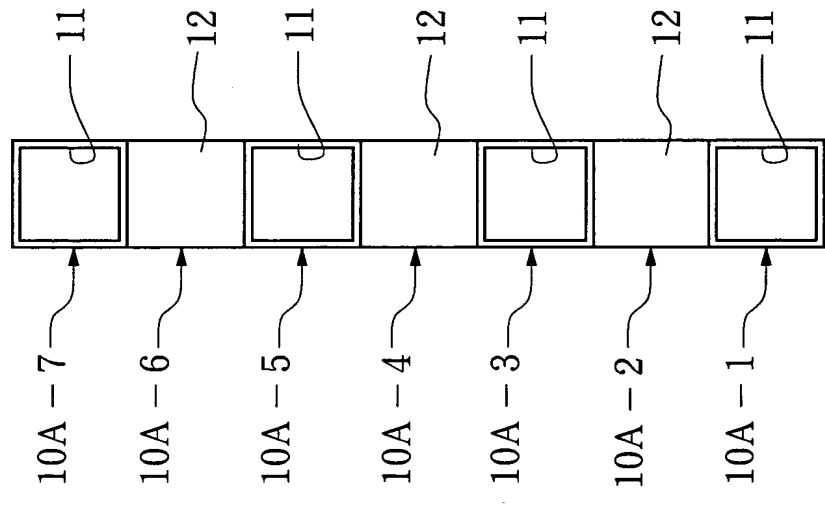
APPROVED O.G. F.C.
CLASS SUBCLASS
E.B.Y.
DRAFTSMAN
MAR 3 1953
PATENT & TRADE MARK

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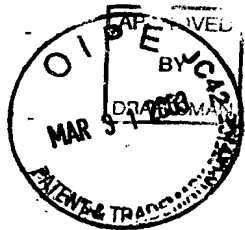
5 : SOUND RADIATING
STRUCTURE

FIG. 2



5 : SOUND RADIATING
STRUCTURE

FIG. 3



APPROVED BY J.C. FIG.
CLASS. SUBCLASS

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FIG. 4 (A)

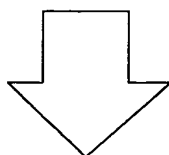
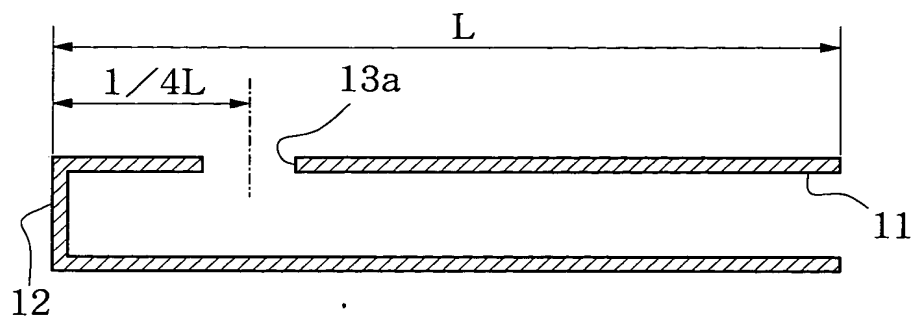


FIG. 4 (B)

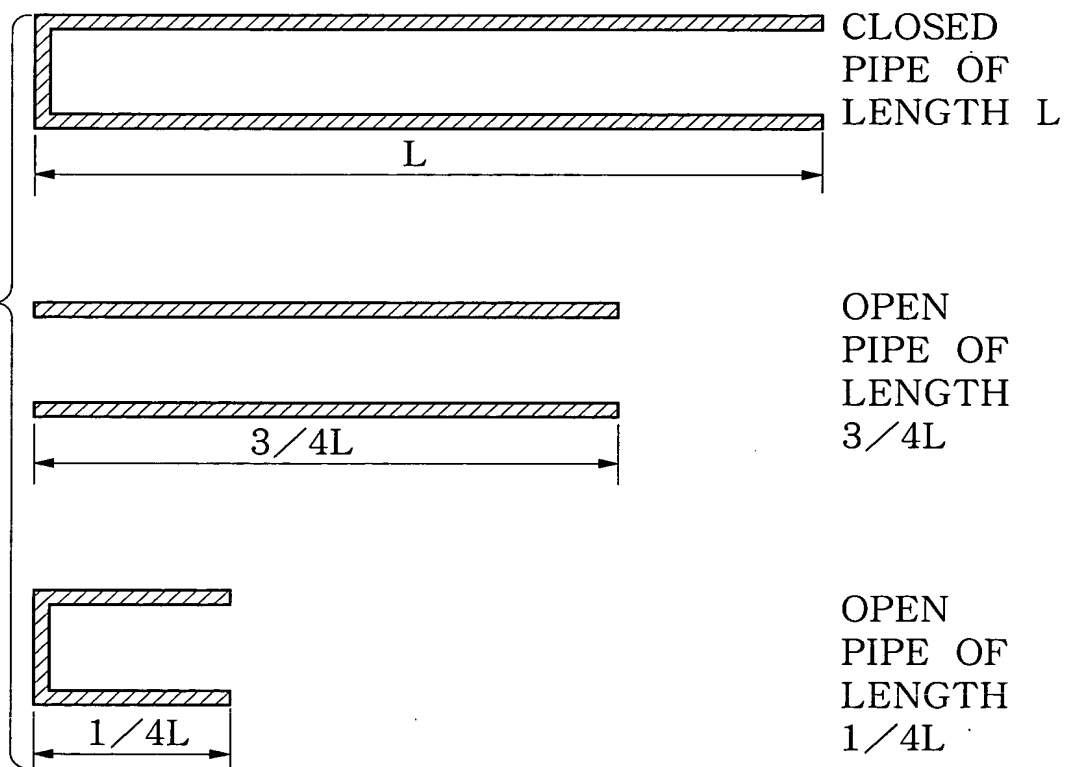
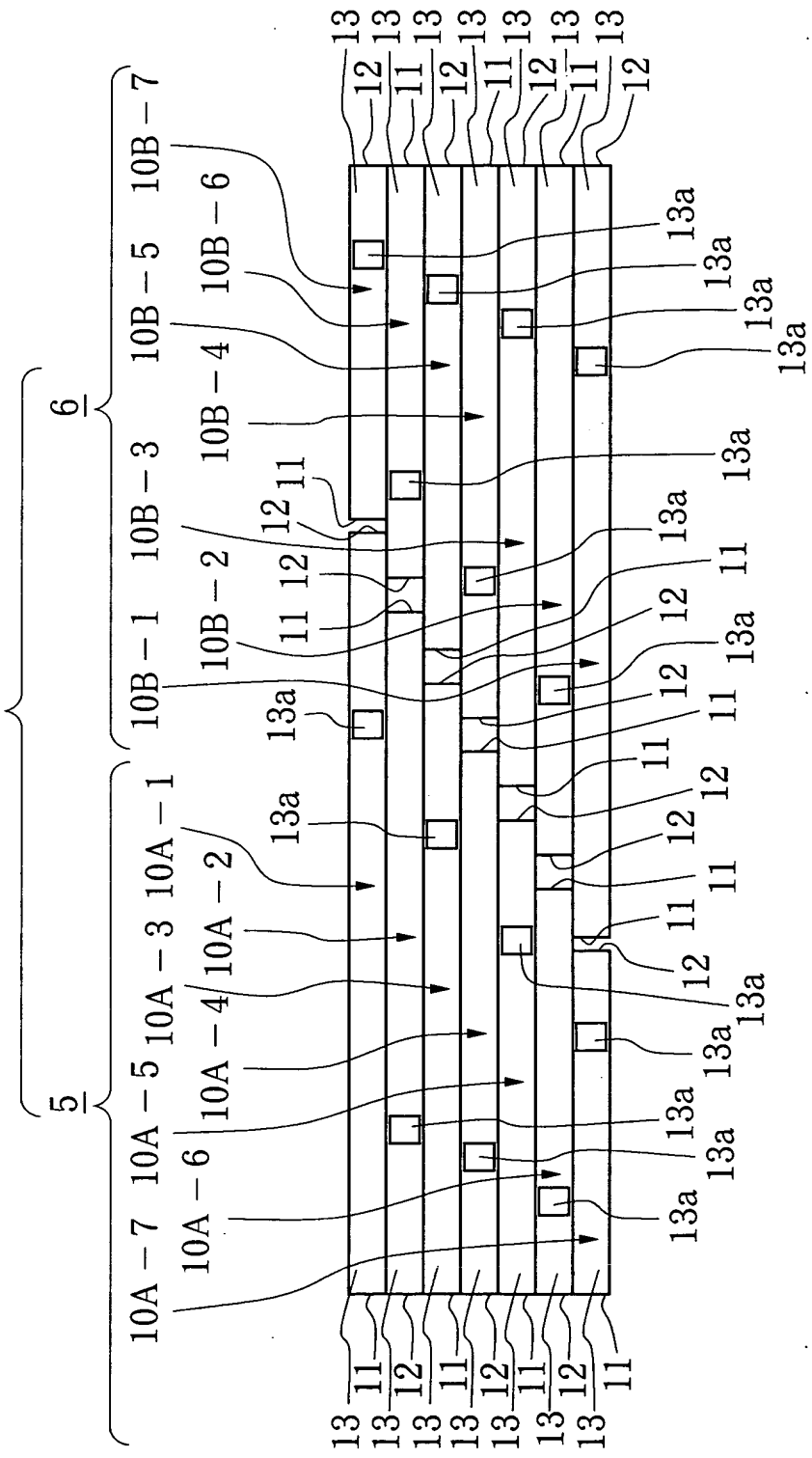
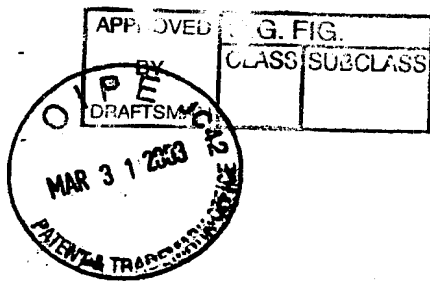


FIG. 5

100 : SOUND RADIATING STRUCTURE





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FIG. 6

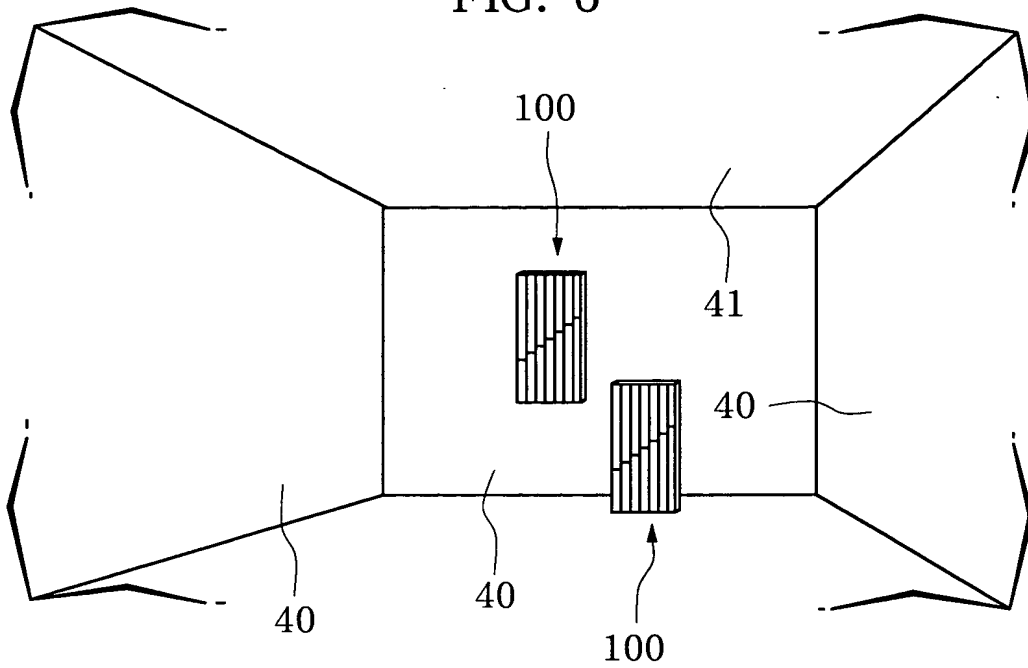
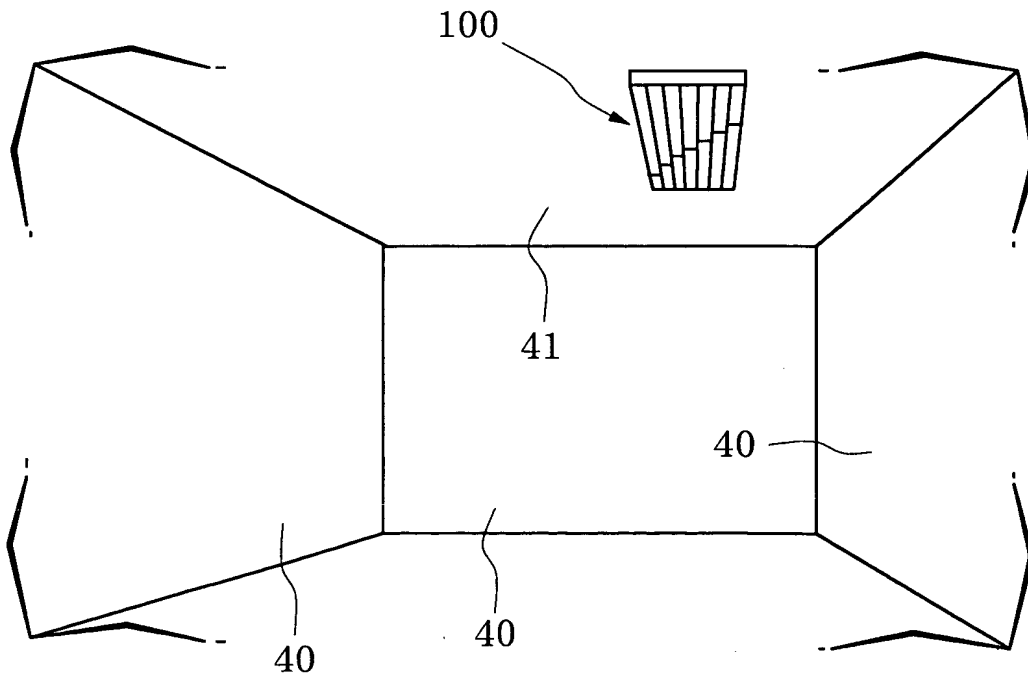
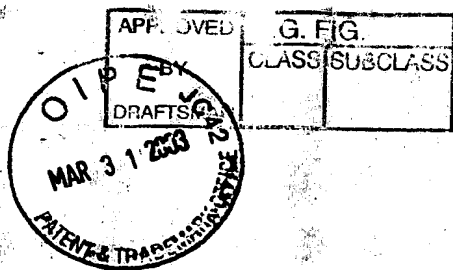


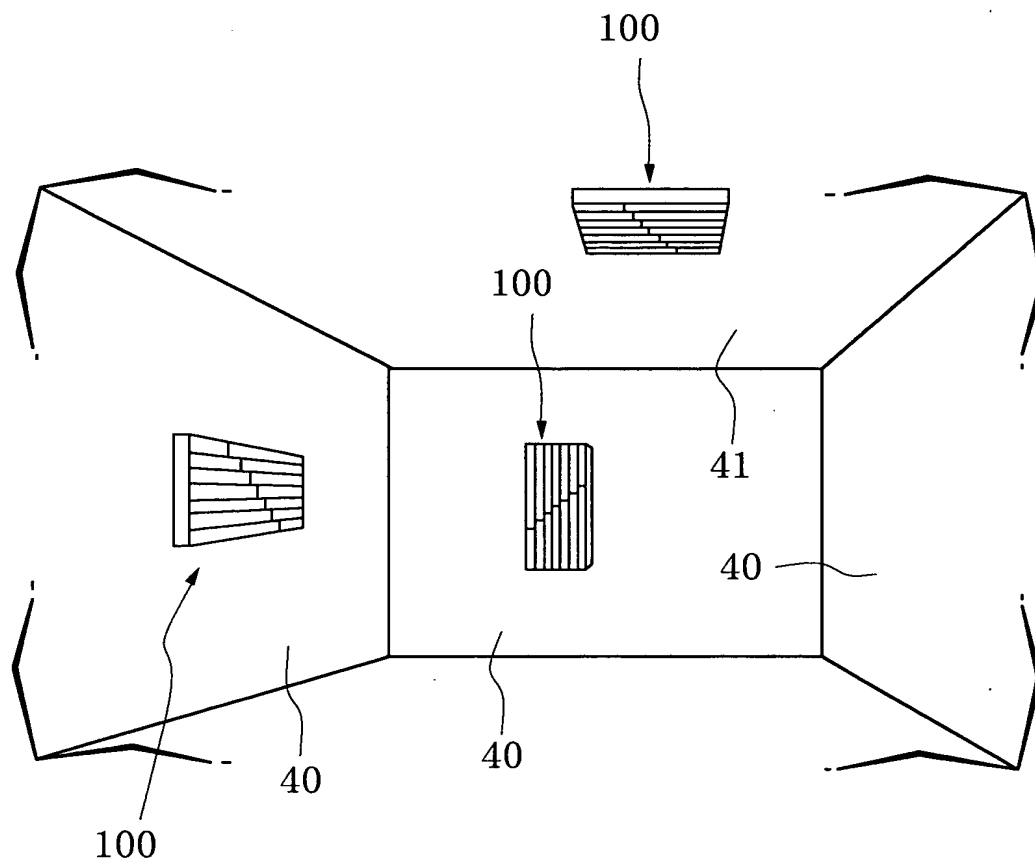
FIG. 7

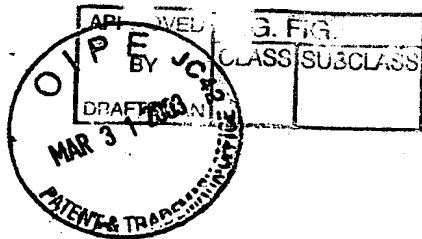




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FIG. 8





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PIPE NO	A1	B1	A2	B2	A3	B3	A4	B4	A5	B5	A6	B6	A7	B7
LENGTH L (mm)	895	850	800	760	720	680	640	605	565	530	500	470	445	425
f (Hz)	95	100	106	112	118	125	133	140	150	160	170	181	191	200
f - S (Hz)	380	400	425	447	472	500	531	562	602	642	680	723	764	800
f - L (Hz)	253	267	283	298	315	333	354	375	401	428	453	482	509	533

FIG. 9

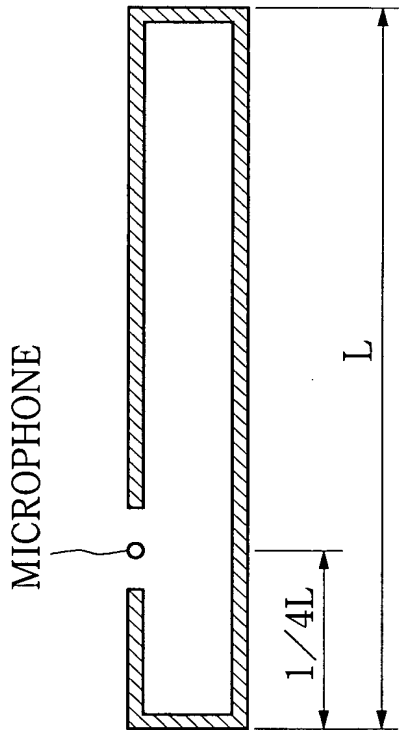
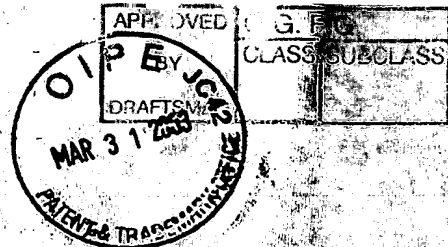


FIG. 10A

PIPE NO	A1	B1	A2	B2	A3	B3	A4	B4	A5	B5	A6	B6	A7	B7
$f-L(\text{Hz})$	127	133	142	149	157	167	177	187	201	214	227	241	255	267
MEASURED VALUE $f1(\text{Hz})$	120	135	140	145	150	180	190	180	185	210	225	225	230	235
MEASURED VALUE $f2(\text{Hz})$	350	350	360	395	390	410	445	490	515	500	510	570	550	610
MEASURED VALUE $f3(\text{Hz})$	850	1000	1100	1200	1000	1100	1350	1250	1600	1000	1400	1500	1200	1800

FIG. 10B



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FIG. 11A

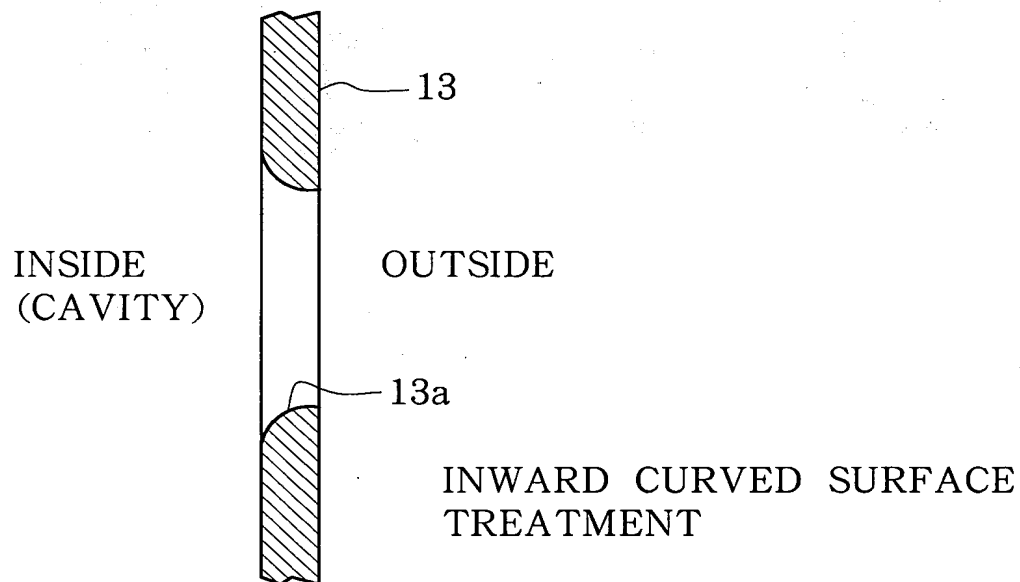


FIG. 11B

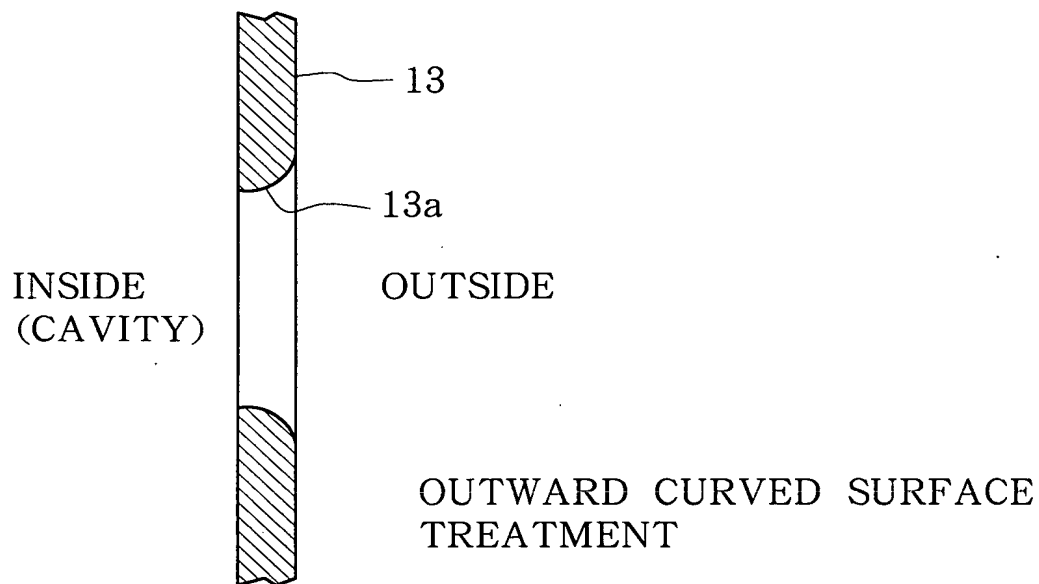


FIG. 12

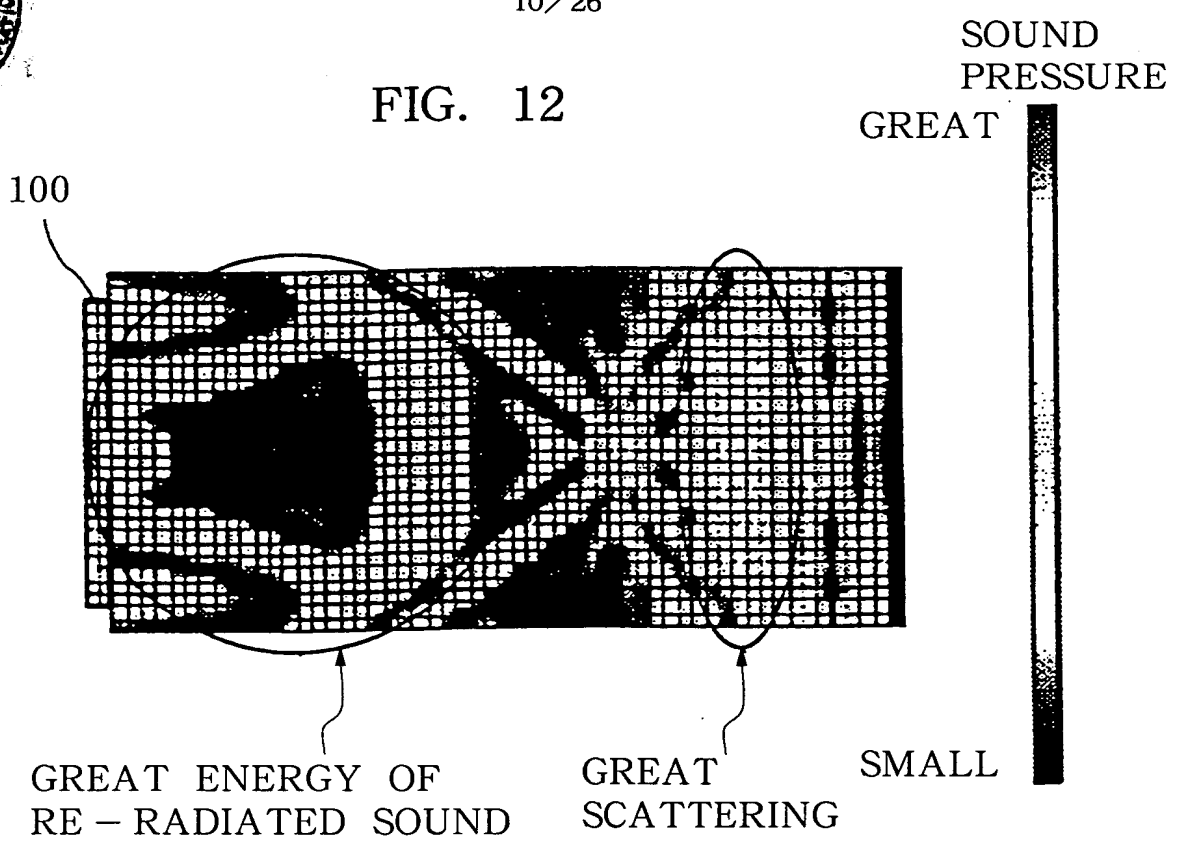
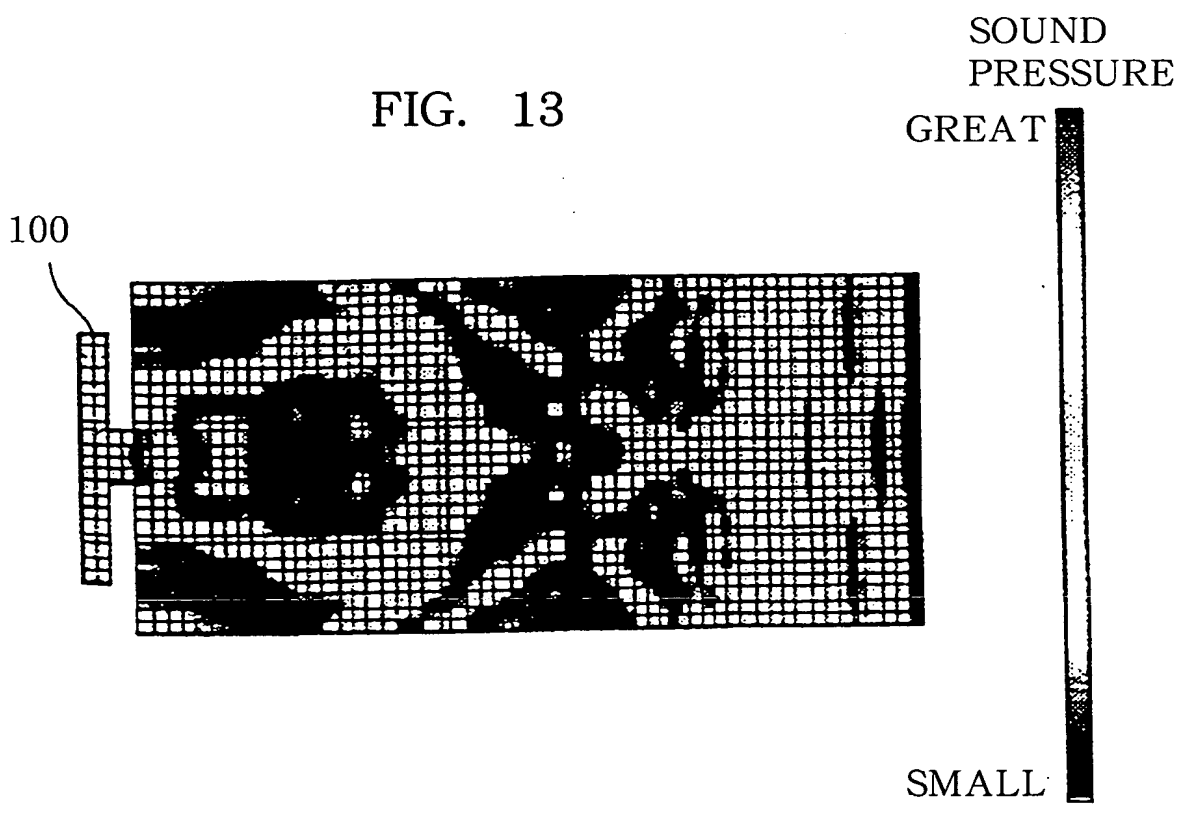


FIG. 13



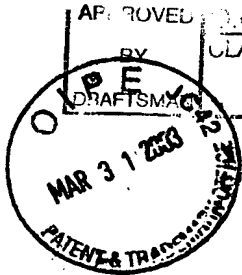


FIG. 14

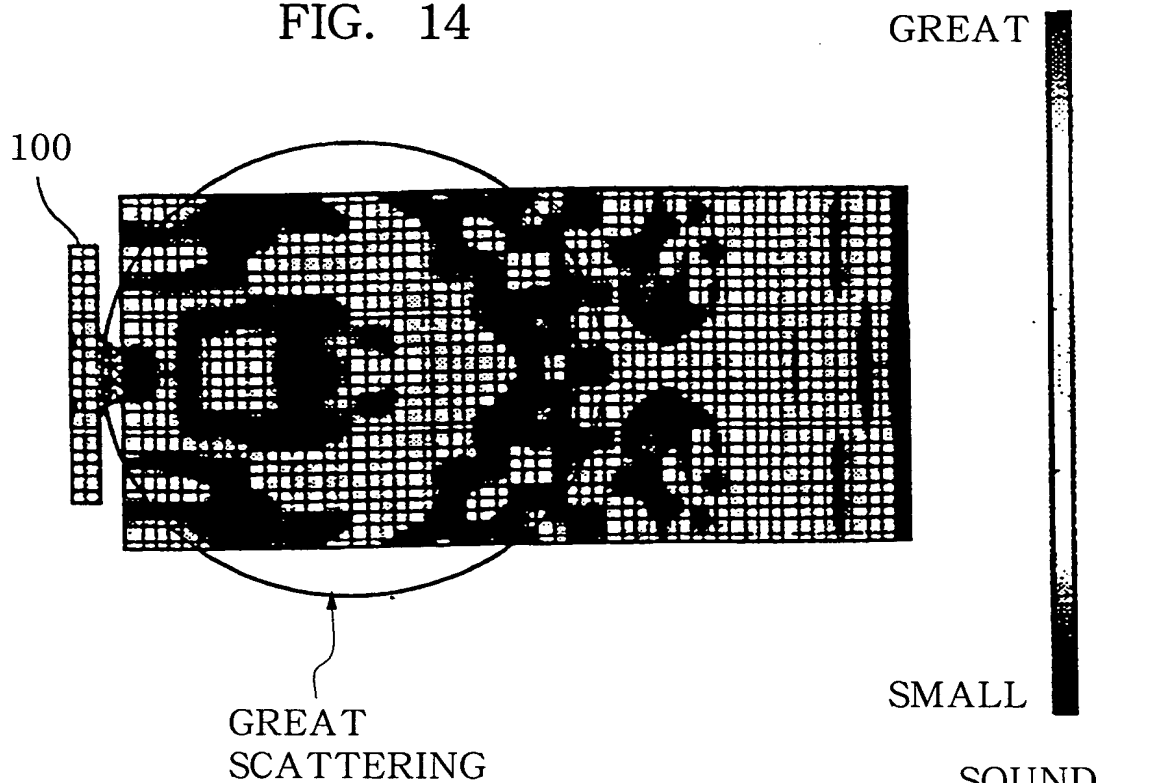
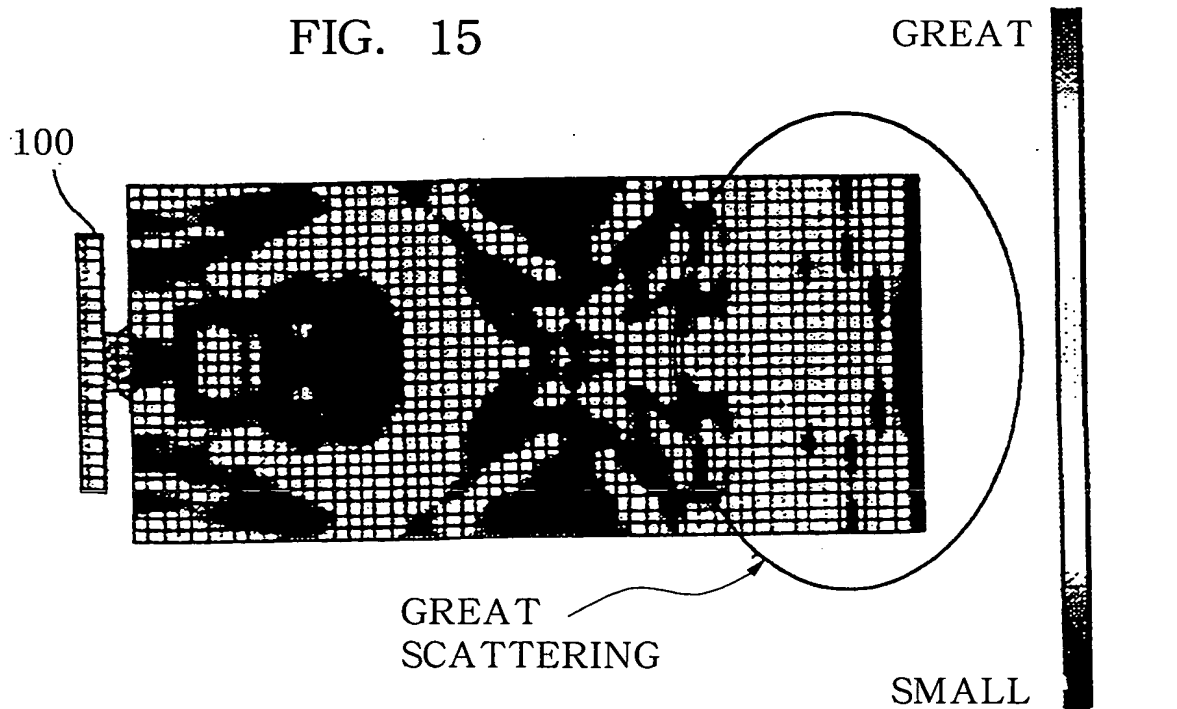
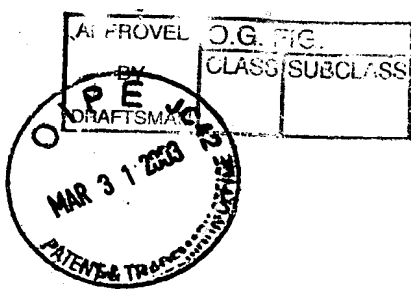


FIG. 15



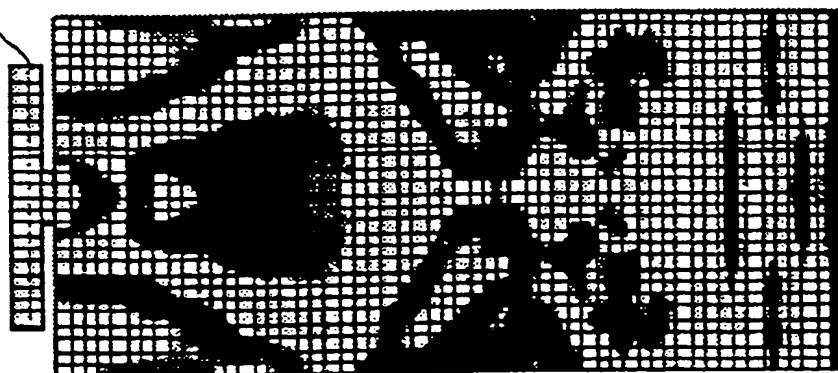


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FIG. 16

SOUND
PRESSURE
GREAT

100

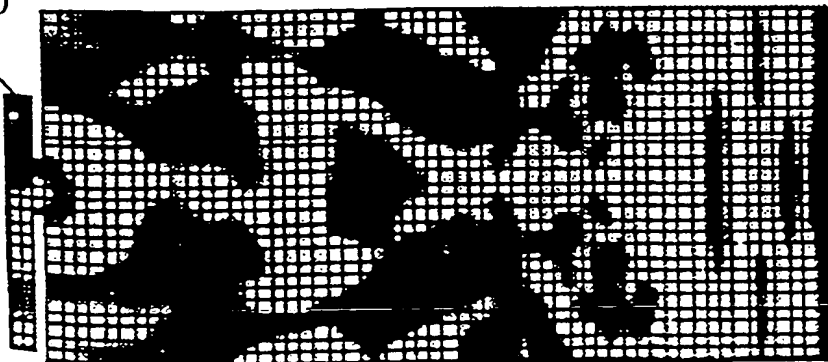


SMALL

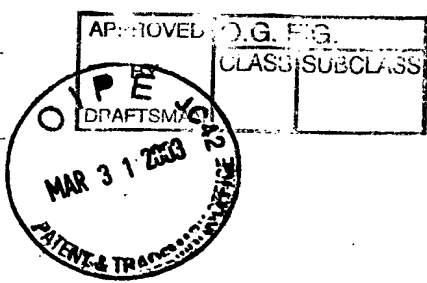
FIG. 17

SOUND
PRESSURE
GREAT

100



SMALL



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FIG. 18

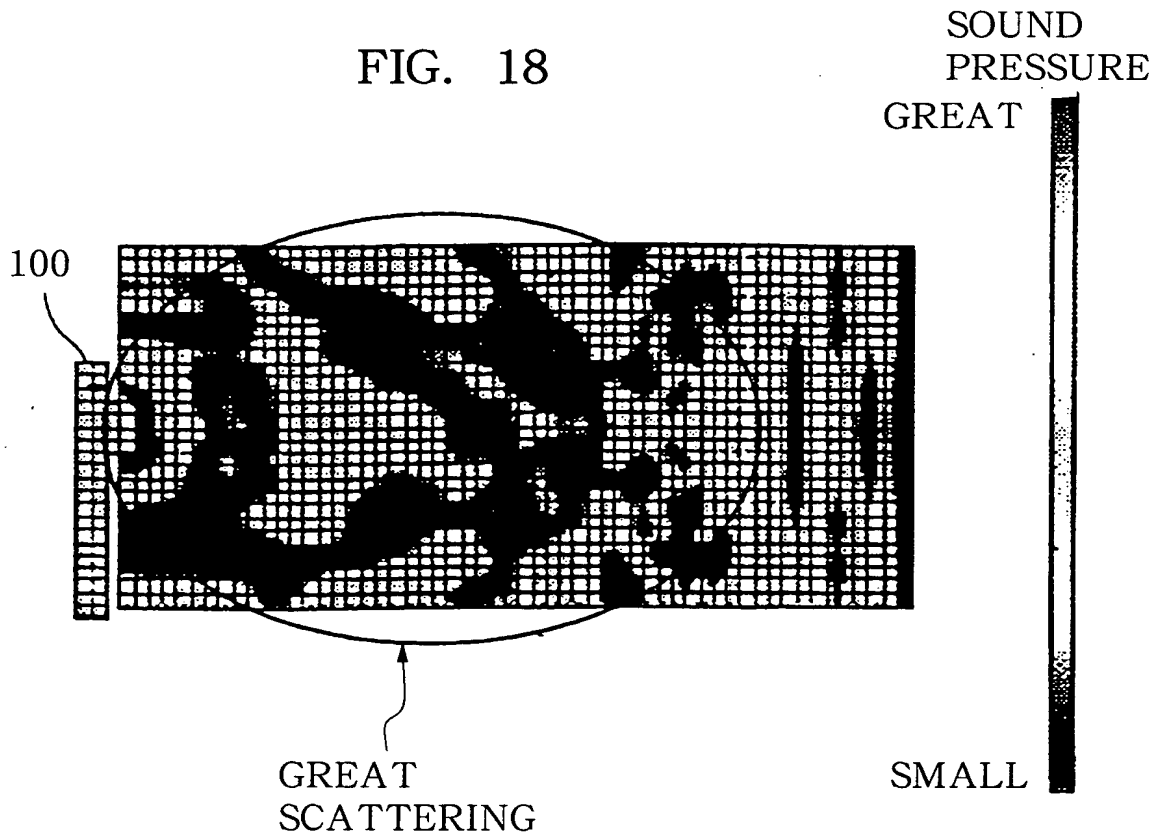
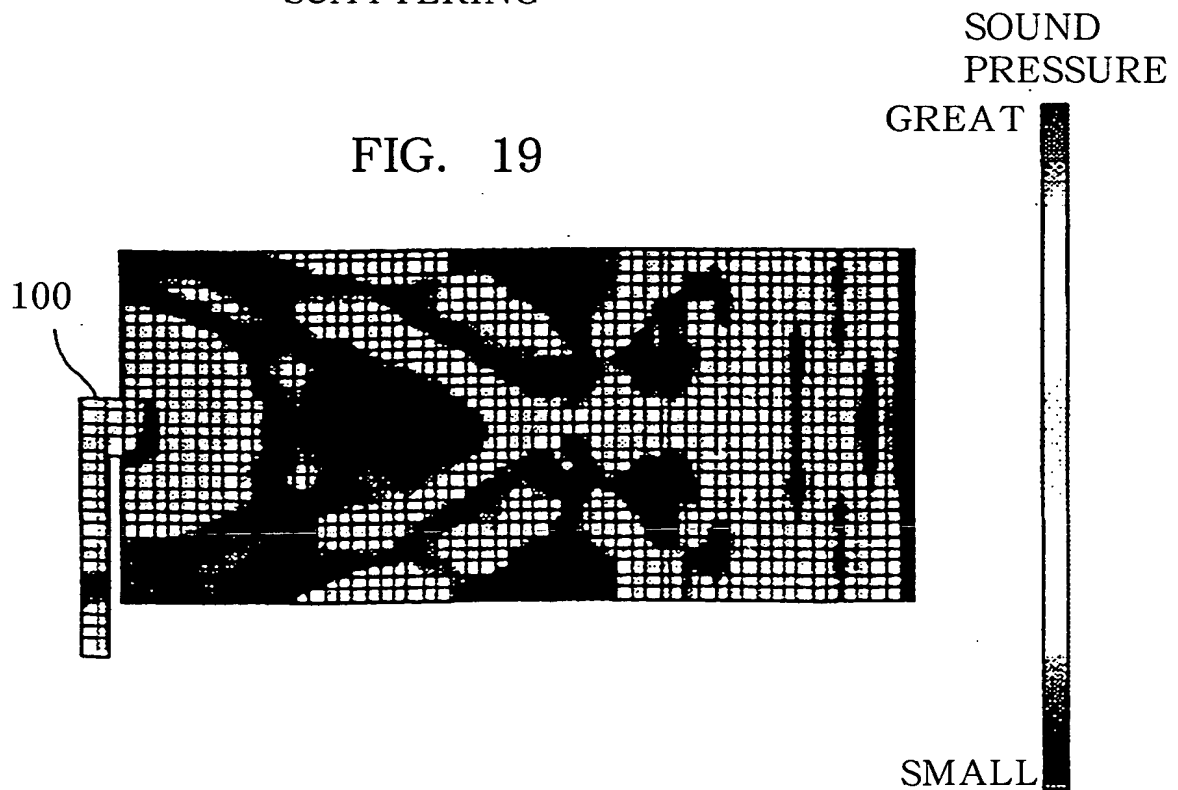
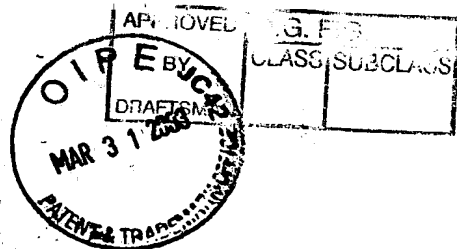


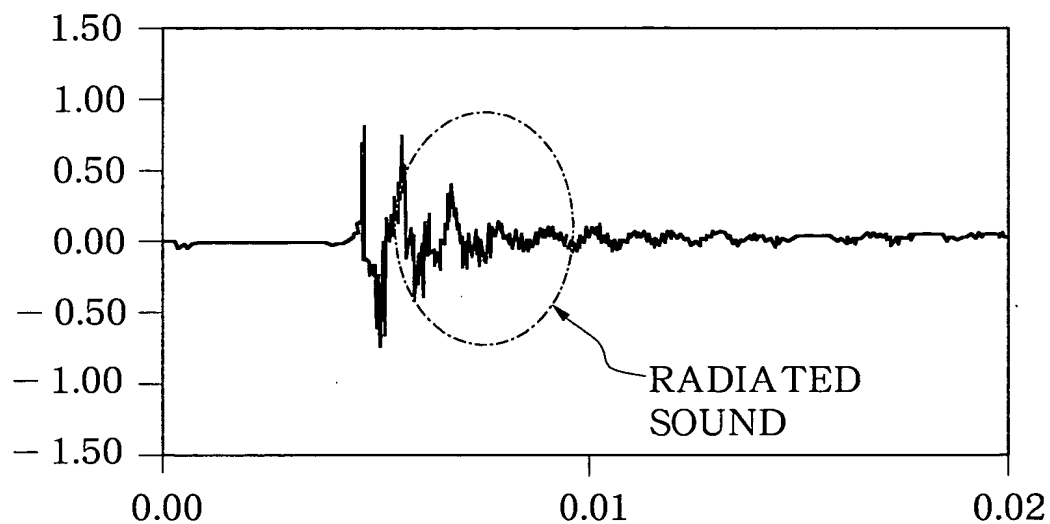
FIG. 19





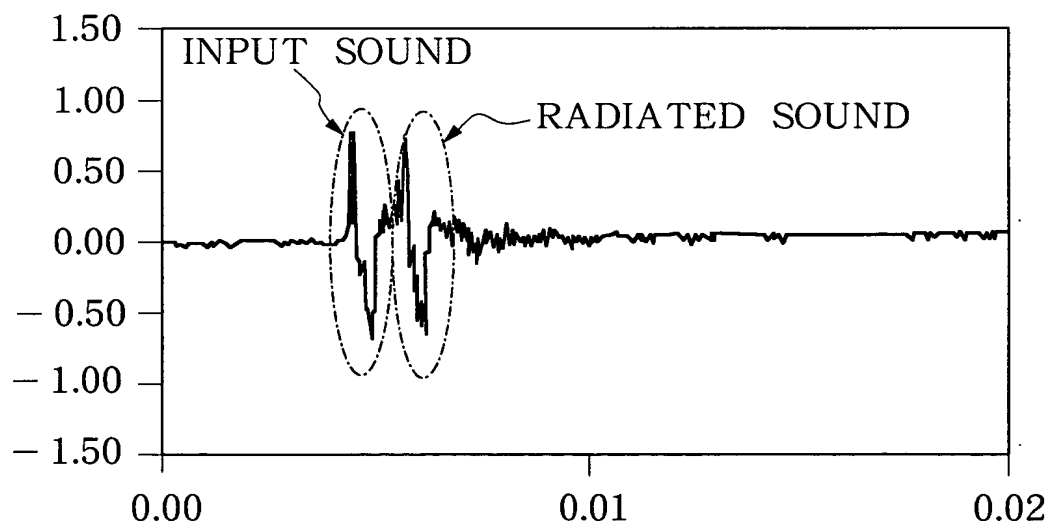
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FIG. 20



WITH SOUND RADIATING STRUCTURE

FIG. 21



WITHOUT SOUND RADIATING STRUCTURE

FIG. 22

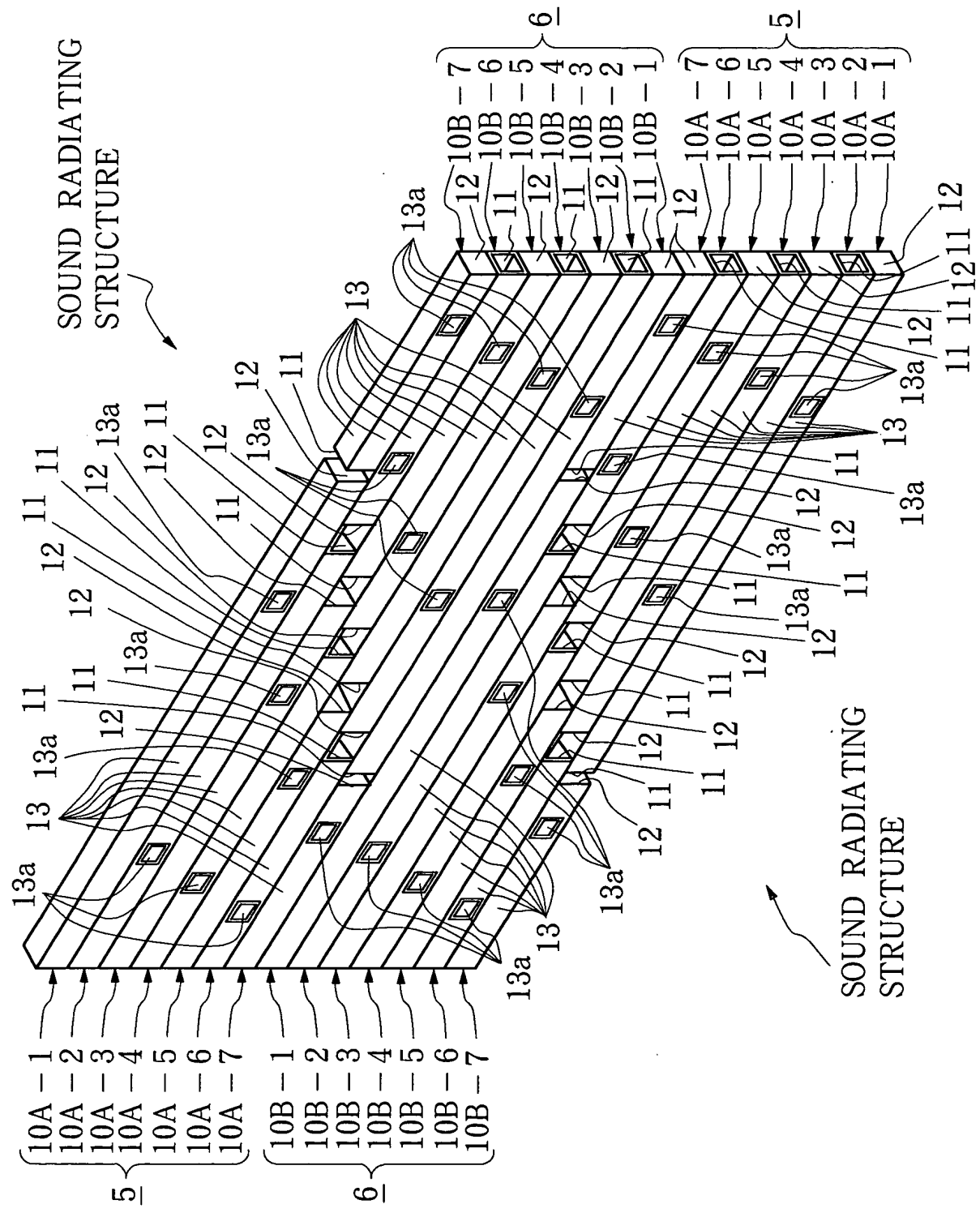


FIG. 23

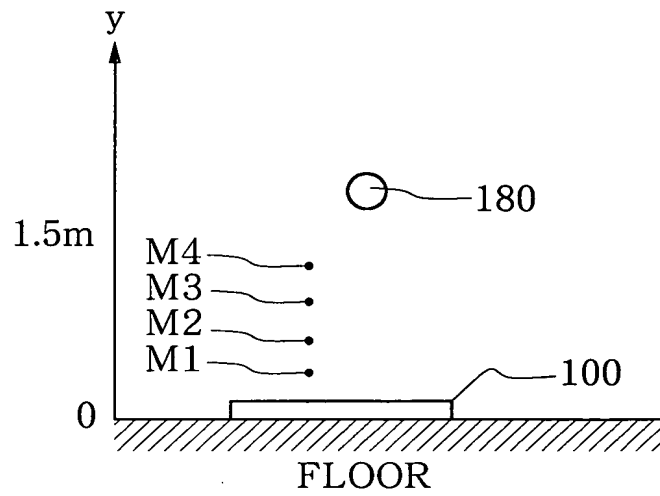
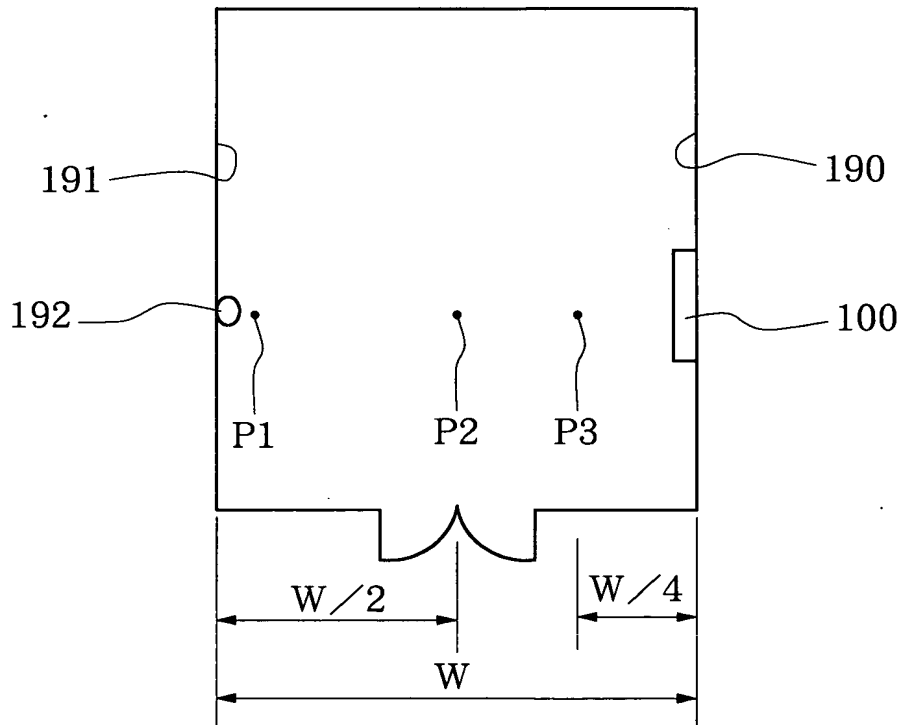
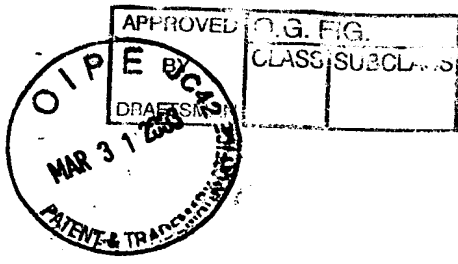


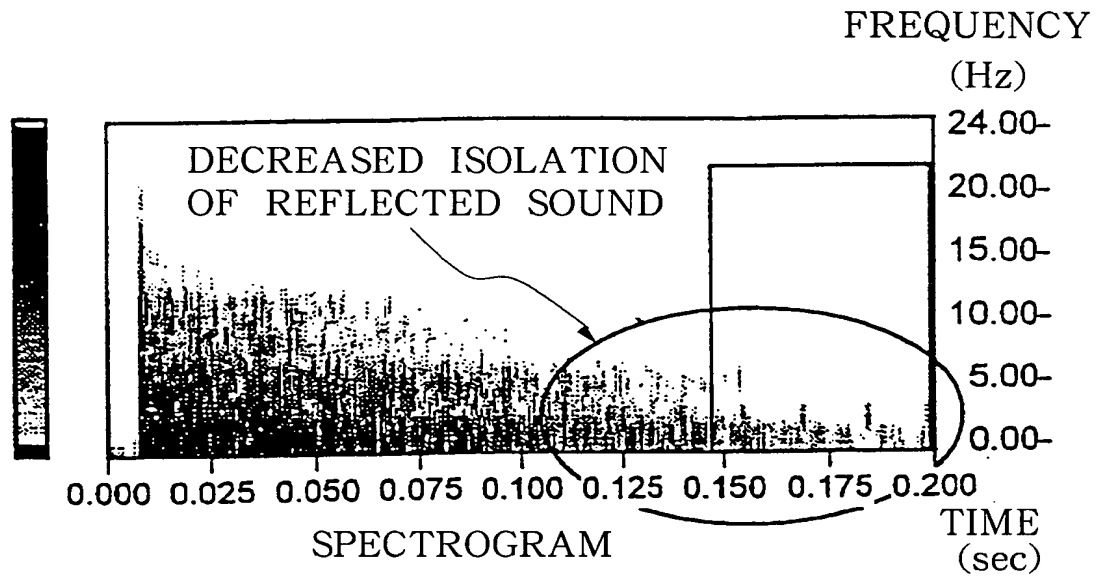
FIG. 24



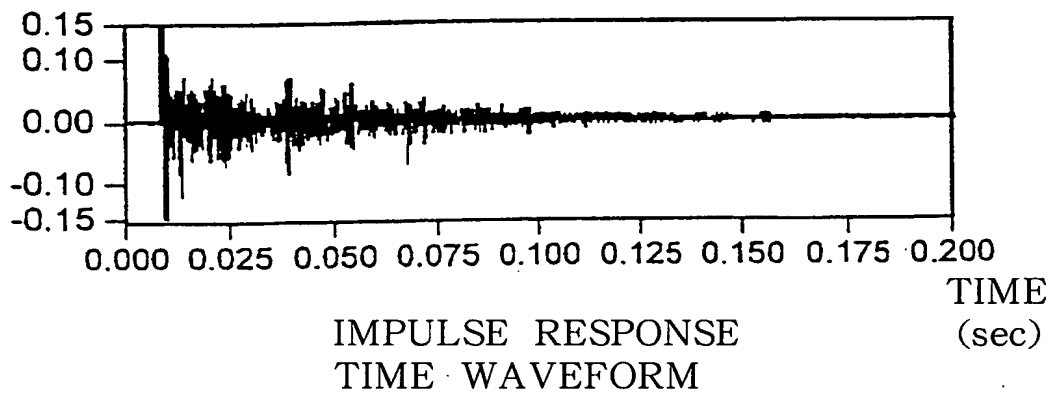


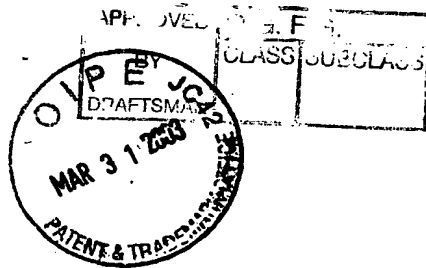
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FIG. 25



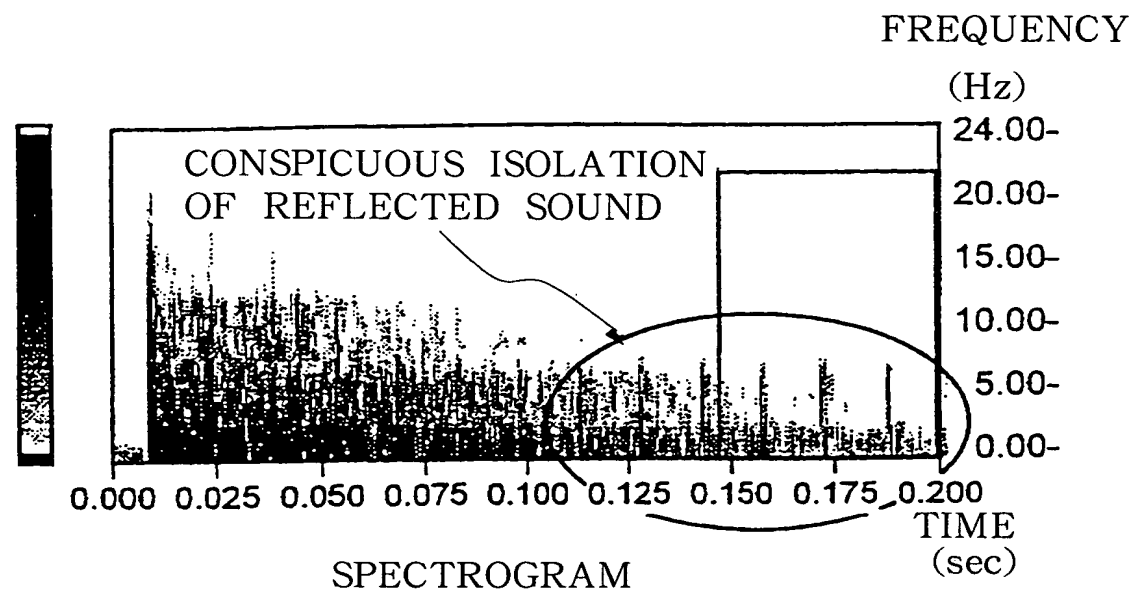
IMPULSE RESPONSE



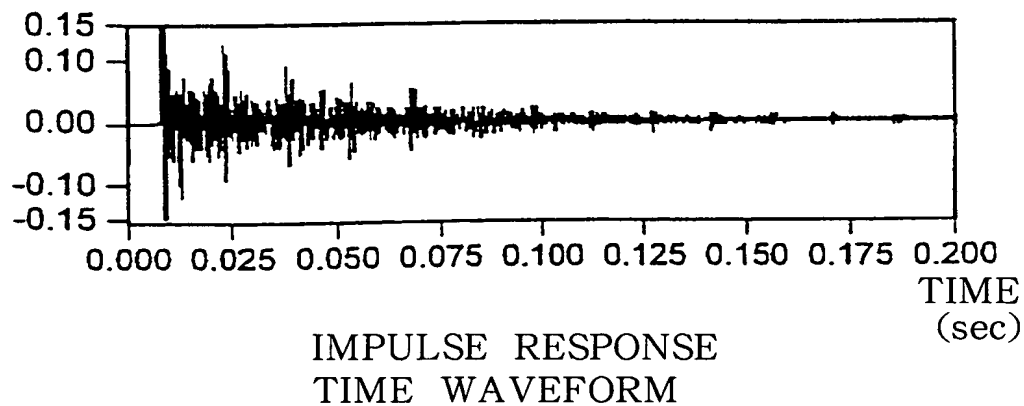


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FIG. 26



IMPULSE RESPONSE



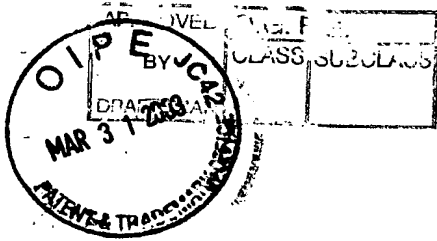


FIG. 27

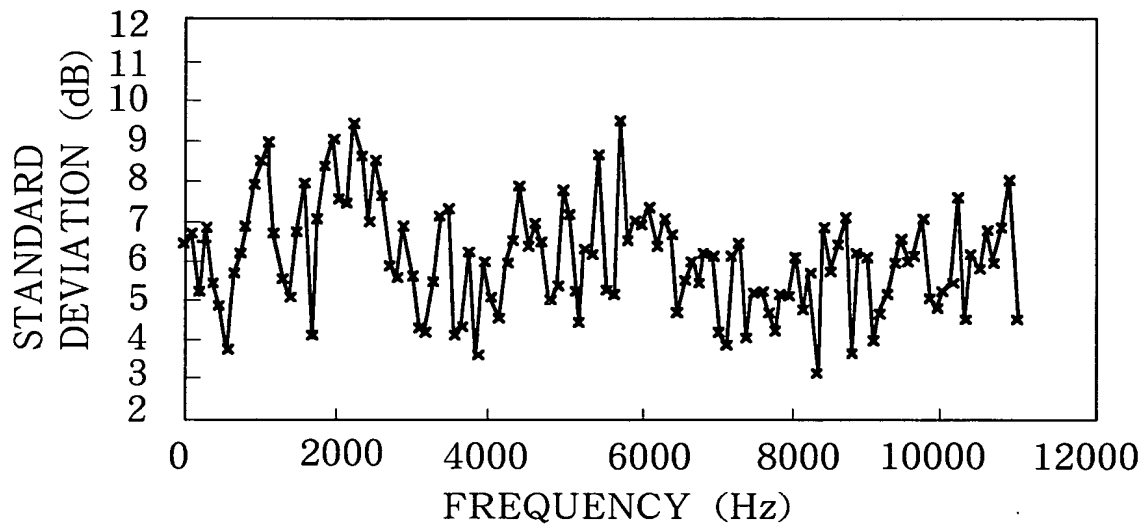
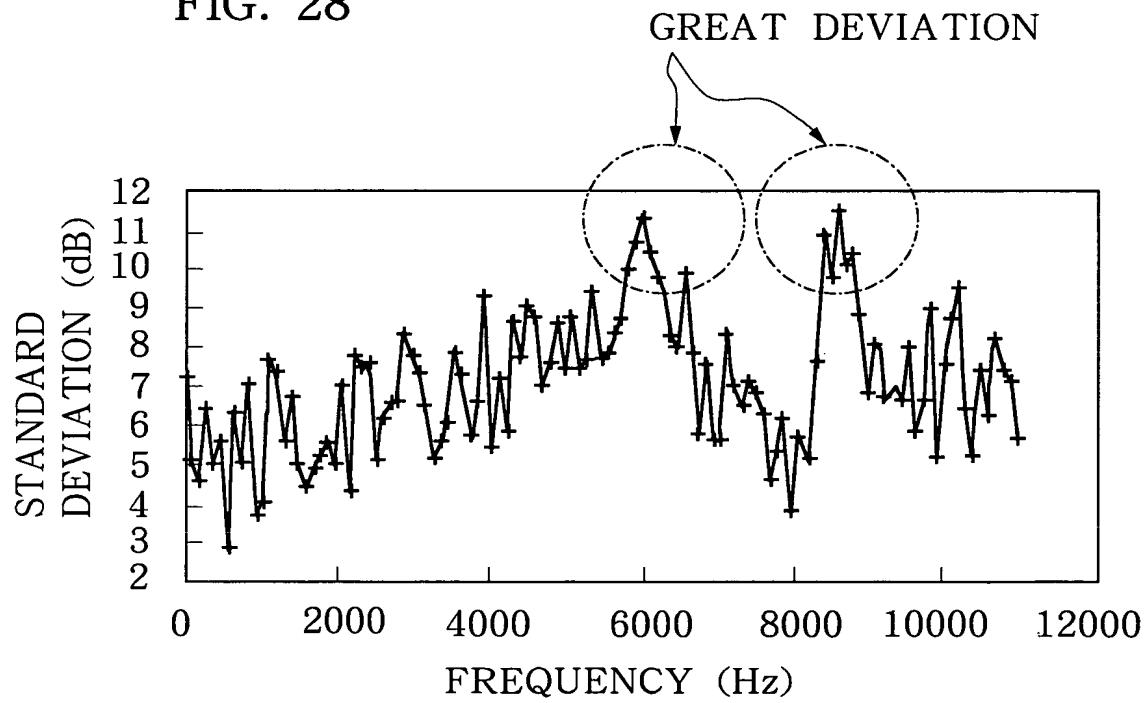
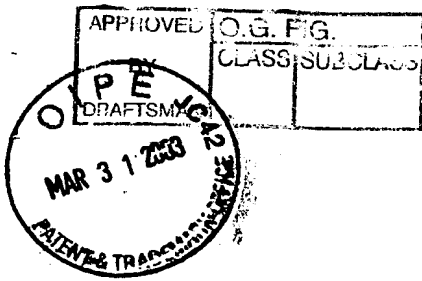


FIG. 28





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FIG. 29

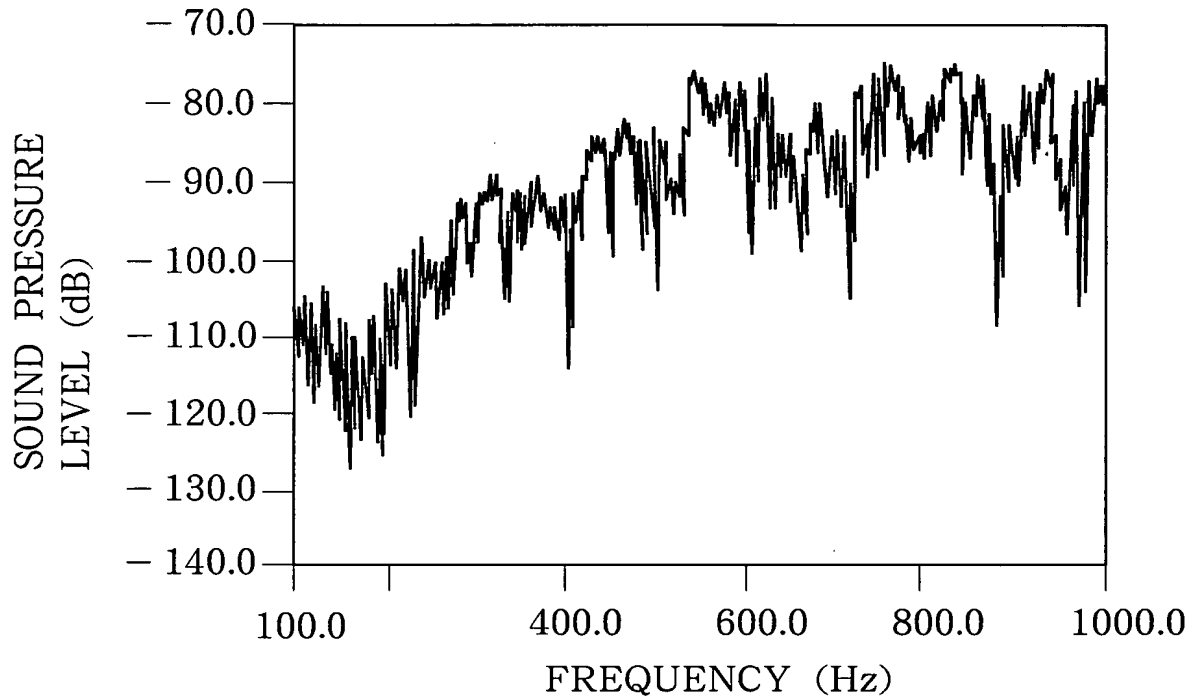


FIG. 30

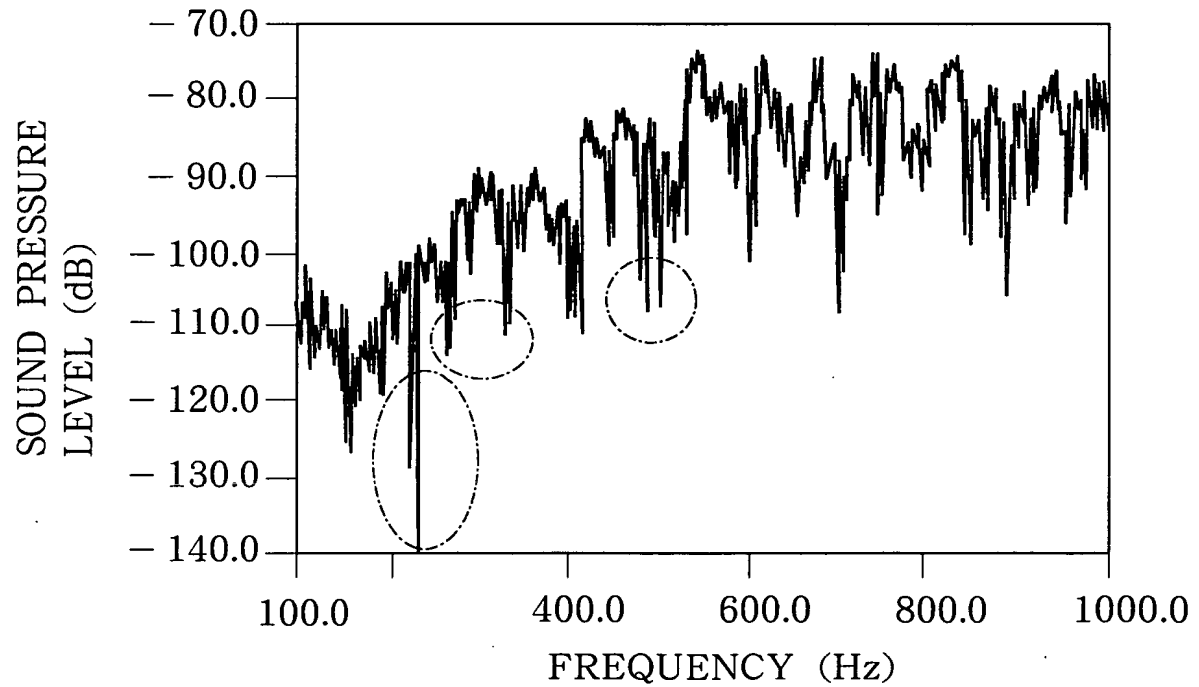
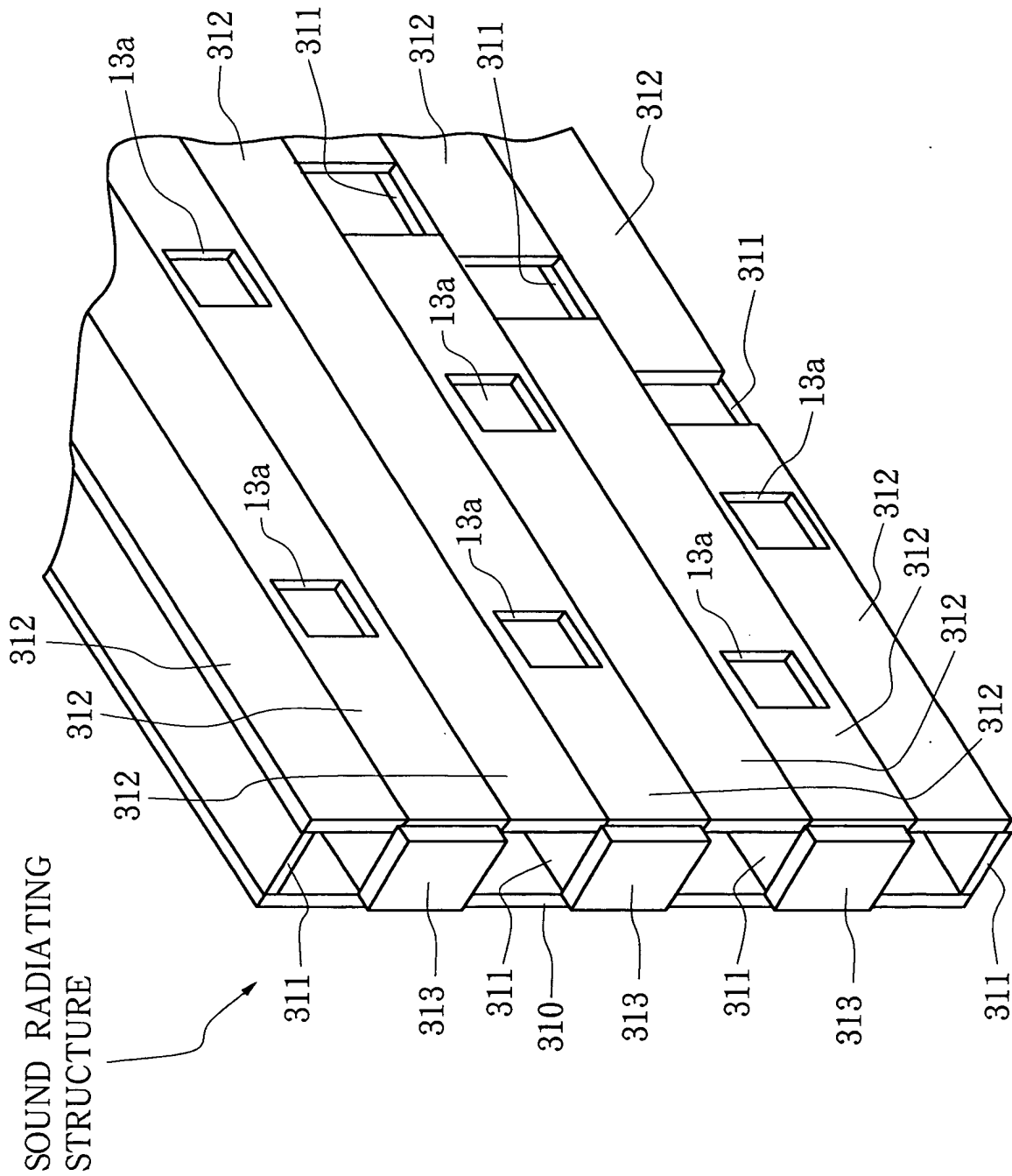
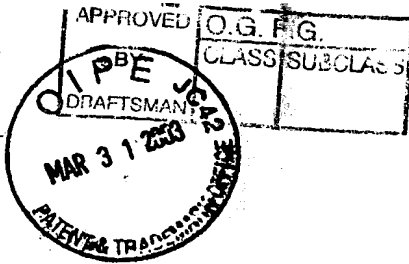


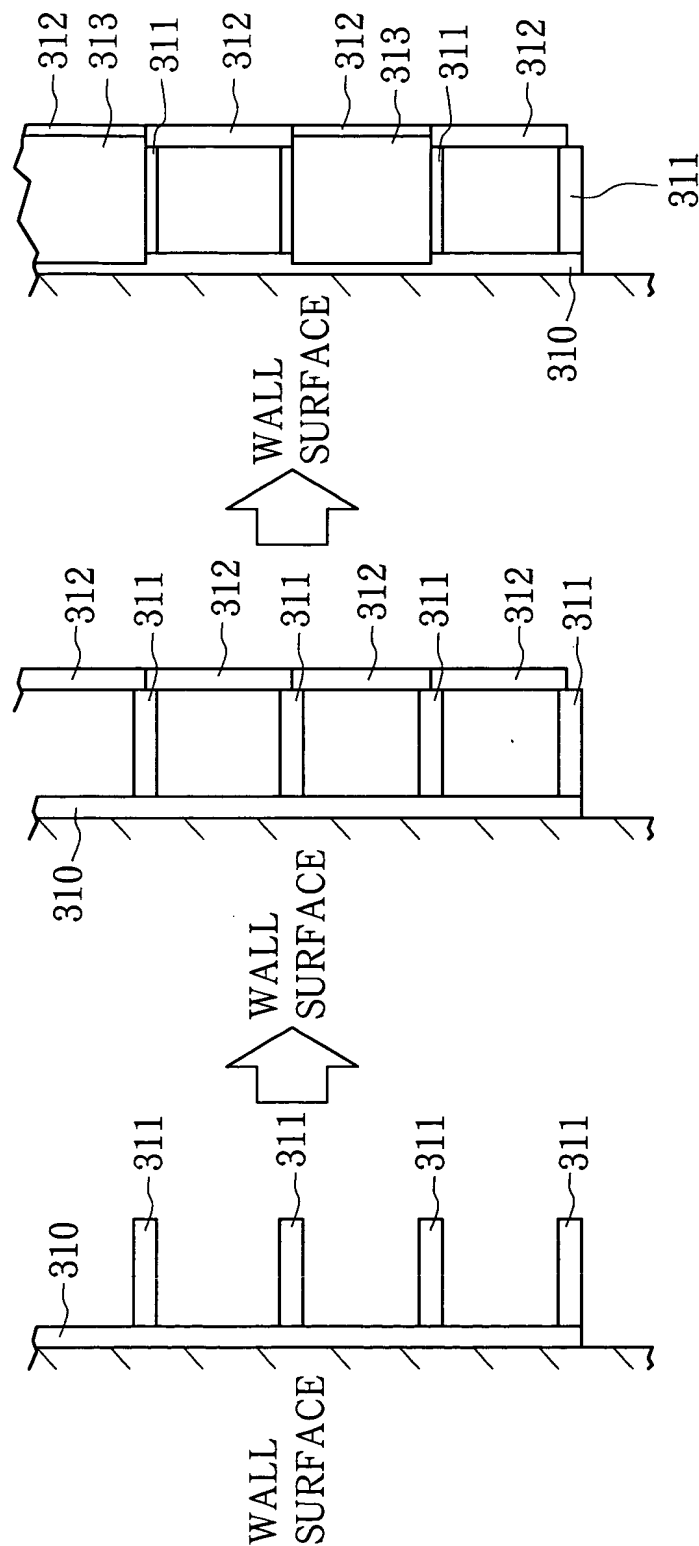
FIG. 31

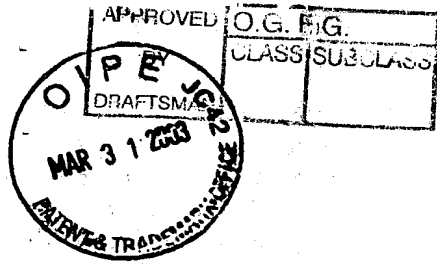




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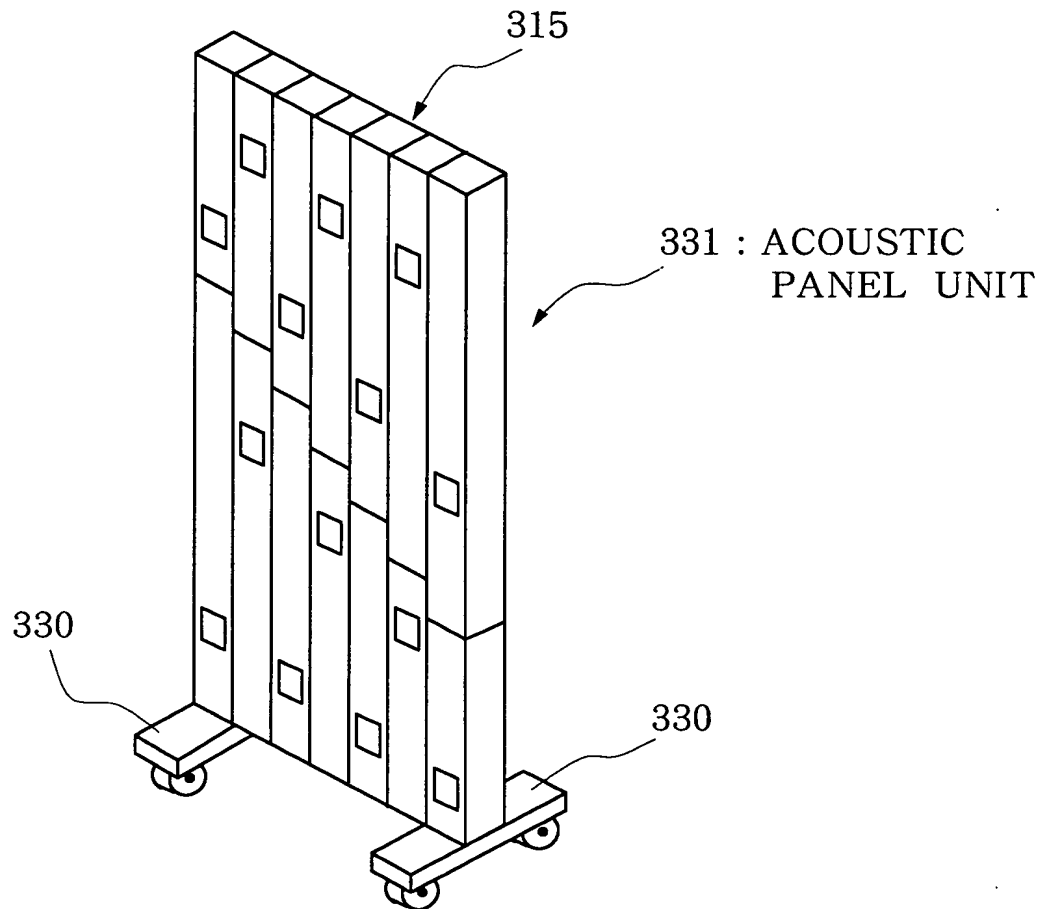
FIG. 32





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FIG. 33



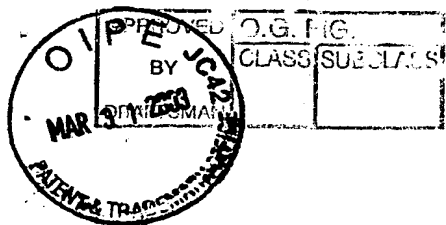


FIG. 34

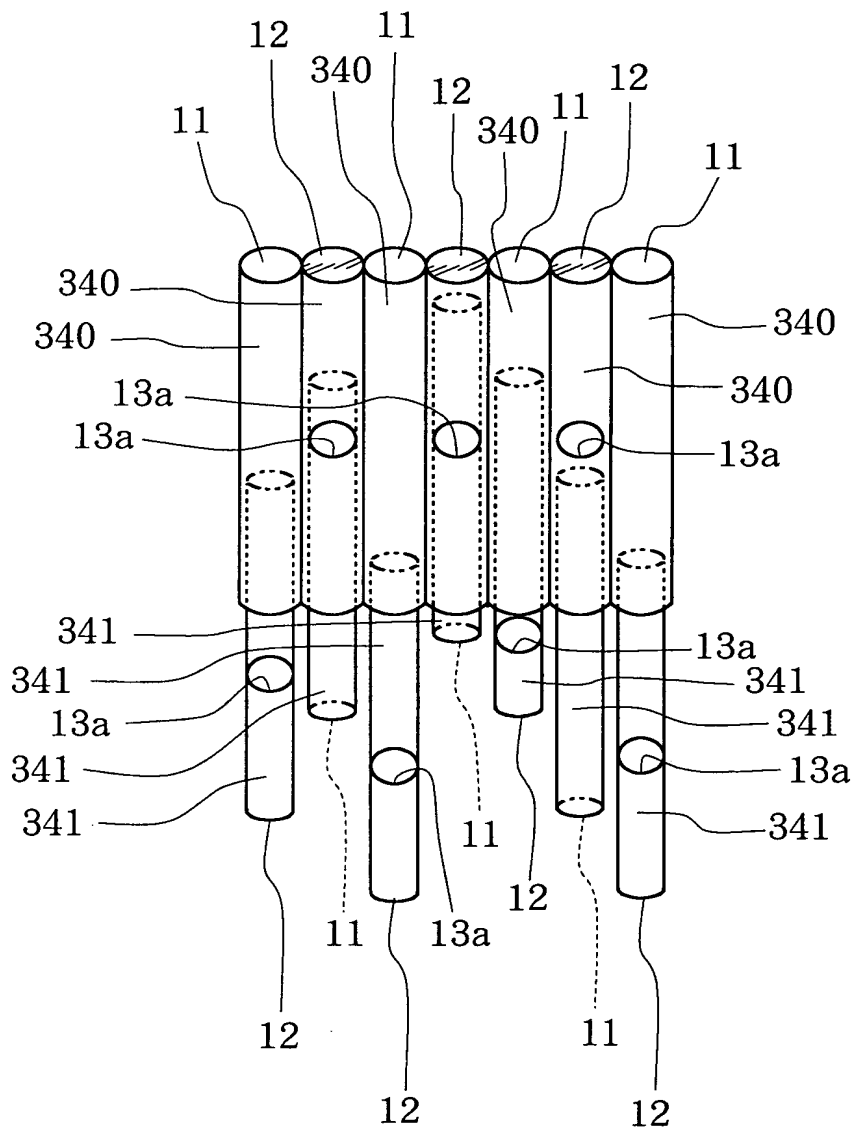


FIG. 35 (A)

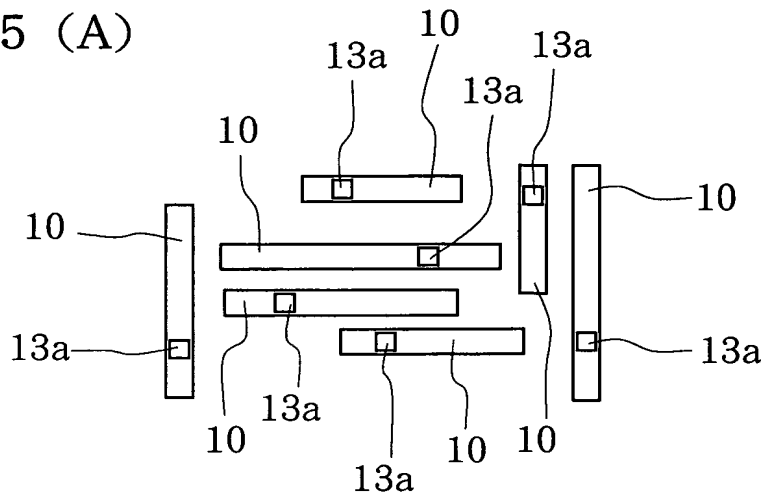


FIG. 35 (B)

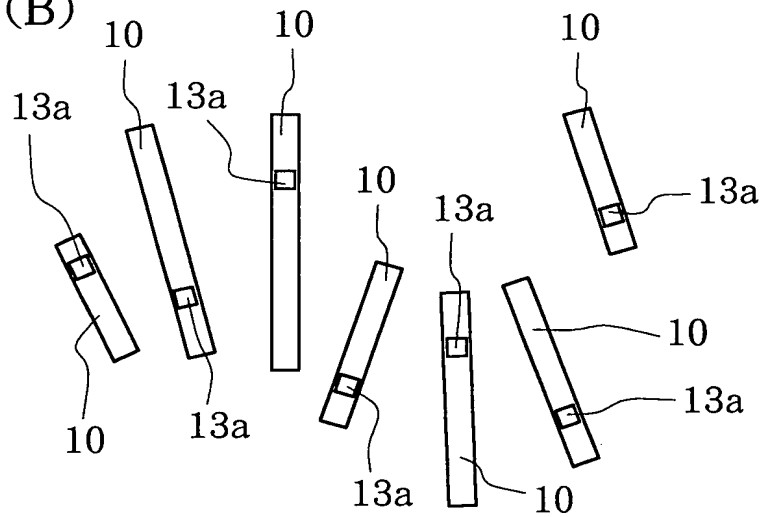
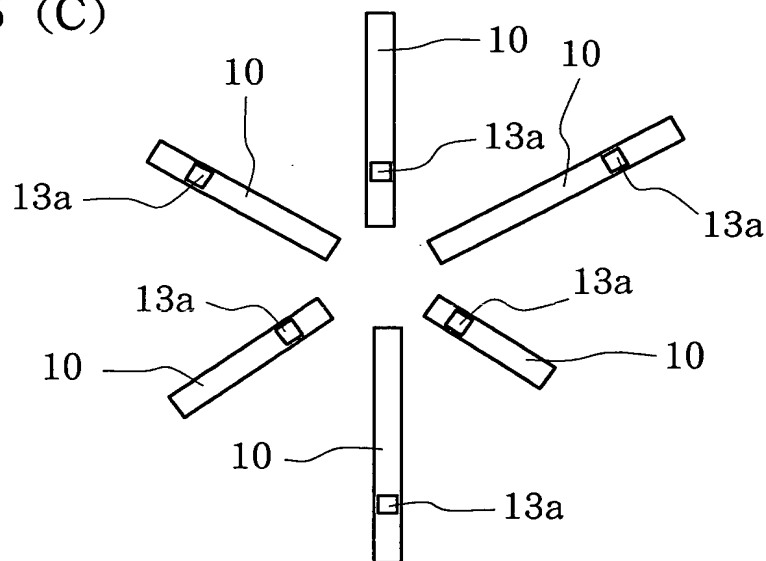
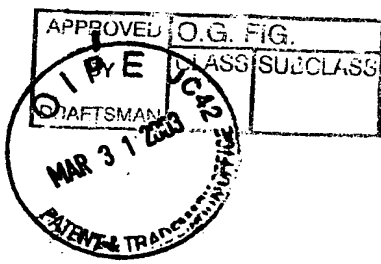


FIG. 35 (C)





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FIG. 36

